

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

In the Matter of the Nebraska Public)
Service Commission, on its own Motion)
Seeking to Conduct an Investigation of)
Intrastate Access Charges for Rural ILECs)

Application No. NUSF-28

REBUTTAL TESTIMONY

HARRY M. SHOOSHAN III

ON BEHALF OF QWEST CORPORATION

SEPTEMBER 4, 2002

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EXECUTIVE SUMMARY

Incumbent local exchange companies ("ILECs") in Nebraska currently charge substantially different rates for interstate and intrastate switched access services. This disparity has created incentives for arbitrage that, in turn, undermine the existing rate structure. The effects are more than simple misreporting by interexchange carriers ("IXCs"). Further consequences include undermining entry by efficient local exchange competitors, encouraging uneconomic entry and putting consumers at risk.

Switched access rates have been historically high in order to help recover, not only the direct costs of switched access, but also the non-traffic-sensitive costs of the network (principally the costs of the local loop). The FCC has moved to adopt more efficient rate structures for price cap ILECs, through its CALLS proceeding, and for rate-of-return ILECs, through its "MAG" Order.

The proposal in this proceeding for all Nebraska ILECs to mirror their interstate switched access charges (and to offset the reductions with an "ISLC") represents another important step in the direction of achieving economically efficient rates and reducing the opportunities for arbitrage. Continuing progress toward efficient rates is vital to the development of an efficiently competitive market in Nebraska, including for residential telephone services and in high cost areas.

I disagree with the position of the Nebraska Rural Independent Telephone Companies that nothing needs to be done now. It is important that Nebraska adopt this new rate structure on a uniform statewide basis; that is, for all ILECs. This permits the Commission to consider appropriate mechanisms for helping to offset any negative impact of the rate restructuring (e.g., by augmenting its universal service, Lifeline and Link-up policies).

I. IDENTIFICATION OF WITNESS

Q1. PLEASE STATE YOUR NAME, EMPLOYER AND POSITION.

A1. My name is Harry M. Shooshan III. I am a principal and co-founder of Strategic Policy Research, Inc. ("SPR"), a public policy and economics consulting firm located at 7979 Old Georgetown Road, Suite 700, Bethesda, Maryland, 20814.

Q2. PLEASE STATE YOUR QUALIFICATIONS.

A2. Before co-founding SPR, I served for eleven years on Capitol Hill. I was chief counsel and staff director of what is now the Subcommittee on Telecommunications and the Internet of the U.S. House of Representatives. As a consultant, I have specialized in communications public policy analysis, regulatory reform and the impact of new technology and competition. I have co-authored several studies on the relationship between telecommunications infrastructure and economic development, including a major study for the Pennsylvania Chamber of Business and Industry. I have also advised firms on business strategies and market opportunities.

I have testified before several Congressional committees, before the Federal Communications Commission ("FCC") and numerous state commissions, including those in Arizona, Illinois, New York, Pennsylvania, New Jersey, Tennessee, and Louisiana. My testimony before state commissions has been on

1 topics related to price regulation, the impact of competition and the
2 reclassification of services. I also served as an advisor to the Iowa Utilities Board
3 and to the staff of the Arizona Corporation Commission where my work included
4 the development of alternative regulation/price regulation plans and
5 implementation of the Telecommunications Act of 1996. The price regulation
6 plan I recommended in Arizona on behalf of the Staff addressed the issue of rate
7 restructuring, including the need to reduce intrastate carrier access charges. I have
8 also been involved in our firm's work with OFTEL, the telecommunications
9 regulatory body in the United Kingdom which adopted the first price regulation
10 plan for an incumbent provider in 1983¹ and has largely achieved rebalanced
11 rates. From 1978 to 1991, I was an adjunct professor of law at Georgetown
12 University Law Center, teaching regulation and communications law.

13 A copy of my curriculum vitae is appended to this testimony as Exhibit 1.
14

15 **Q3. HAVE YOU TESTIFIED PREVIOUSLY BEFORE THE NEBRASKA**
16 **PUBLIC SERVICE COMMISSION ("COMMISSION")?**

17 **A3.** No. This is the first time I have testified before the Nebraska Commission.

¹ OFTEL, "A Brief History of Recent U.K. Telecoms and Oftel," www.oftel.gov.uk/about/history.htm#1 (obtained June 7, 2002).

II. PURPOSE OF TESTIMONY

Q4. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A4. The purpose of my testimony, on behalf of Qwest Corporation ("Qwest"), is to rebut the testimonies of Ms. Sue Vanicek and Mr. Steven Watkins on behalf of the Nebraska Rural Independent Telephone Companies. Specifically, I will summarize the principles that support the need for rate restructuring² and discuss the importance of putting in place a framework for restructuring the rates of all incumbent local exchange carriers ("ILECs") in Nebraska. Further, I will discuss why it is important that the Nebraska Commission address the issue of rate restructuring for all ILECs at this time rather than proceeding in a "piecemeal" fashion or ignoring the problem as Ms. Vanicek and Mr. Watkins appear to suggest. In large part, this is the right time for the Commission to insure that the appropriate statewide "safety nets" are in place, especially as rates reach efficient levels in high cost areas.

² These principles are discussed at length in the Direct Testimony of Dr. Jeffrey H. Rolfs, my colleague at SPR, in Application No. NUSF 17, attached to the Direct Testimony of Mr. Scott McIntyre on behalf of Qwest in this proceeding. I have enunciated these principles in testimony on this same topic that I have filed with the Arizona Corporation Commission. Direct Testimony of Harry M. Shooshan III on behalf of Qwest Corporation, Investigation of the Cost of Telecommunications Access, Docket No. T-00000D-00-0672 (June 28, 2002).

III. RESTRUCTURING INTRASTATE SWITCHED ACCESS RATES

**Q5. PLEASE DESCRIBE THE CURRENT SITUATION WITH REGARD TO
INTERSTATE AND INTRASTATE SWITCHED ACCESS.**

A5. As witnesses Skluzak (at 2-3) and Appleby (at 2), on behalf of AT&T and Sprint, respectively, testified, Nebraska ILECs (including Qwest) provide interstate and intrastate switched access at very different prices. This Commission appears to recognize this disparity as well and seeks a remedy.³ The existing rate price disparities are not cost-based, i.e., the prices for switching and transmission between networks are based solely on the jurisdictional nature of traffic transmitted (i.e., interstate versus intrastate) rather than on any differences in the network functions involved in handling that traffic.

After the breakup of AT&T in 1984, both the FCC and state commissions initially opted for maintaining high access charges to help cover the fixed costs of the network, rather than restructuring rates to reflect changing telecommunications markets.⁴ While both federal and state access charges have been reduced considerably over time, in most jurisdictions, disparities remain. The FCC's

³ According to the Direct Testimony of Mr. Skluzak (at 2-3), the Nebraska Commission found that there are disparities between intrastate and interstate switched access rates of Nebraska ILECs.

⁴ One of the principal effects of divestiture was that AT&T no longer had the incentive to support high access charges and, indeed, became one of the most vocal proponents of reducing those prices.

1 CALLS Order⁵ and its “MAG” Order⁶ have resulted in significant reductions in
2 interstate rates of price cap ILECs and the implementation of efficient rate
3 structures for remaining ILECs, respectively. States must keep pace.

4 The disparity between intrastate and interstate switched access rates, the subject of
5 this proceeding, is only one aspect of the larger set of intercarrier compensation
6 rates (including local termination rates) that involve charging a wide range of
7 prices, based on varying cost methods and policy objectives, for essentially the
8 same network functions. The disparities in this larger set of prices, in turn, have
9 skewed incentives for competitive entry and the efficient use of resources by
10 carriers and customers.⁷ This Commission can begin to address this larger
11 problem by restructuring intrastate switched access rates for all ILECs in
12 Nebraska to mirror their interstate counterparts.⁸

⁵ *Sixth Report and Order* in CC Docket Nos. 96-262 and 94-1; *Report and Order* in CC Docket No. 99-249; and *Eleventh Report and Order* in CC Docket No. 96-45 (known as the *CALLS Order*) (released May 31, 2000).

⁶ Second Report and Order and Further Notice of Proposed Rulemaking in CC Docket No. 00-256. Fifteenth Report and Order in CC Docket No. 96-45, and Report and Order in CC Docket Nos. 98-77 and 98-166 (known as the “MAG Order”) (released November 8, 2001). I am aware that Mr. Watkins has criticisms of the FCC’s findings. My recommendation that the Nebraska Commission move in the direction of mirroring interstate rates for rural ILECs can be undertaken regardless of the final disposition of the FCC proceeding.

⁷ It would have been far wiser, although perhaps politically unachievable, to have restructured rates prior to the introduction of local competition. To the extent that rural ILECs are not yet faced with the same competitive pressures as companies such as Qwest, it is an even better time to make the necessary adjustments than to wait until competitors have made their entry decisions.

⁸ The FCC has opened a docket to examine this problem from the interstate perspective: In the Matter of Developing a Unified Intercarrier Compensation Regime, CC Docket No. 01-92, *Notice of Proposed Rulemaking* (April 27, 2001).

1

2 **Q6. MR. WATKINS (AT 16) AND MS. VANICEK (AT 3-4) RECOMMEND**
3 **THAT THE NEBRASKA COMMISSION NOT MAKE ANY CHANGES**
4 **TO NEBRASKA RURAL ILEC INTRASTATE SWITCHED ACCESS**
5 **RATES. WHAT PUBLIC INTEREST CAN BE SERVED BY**
6 **MAINTAINING THE EXISTING DISPARATE SWITCHED ACCESS**
7 **RATES?**

8 **A6.** Contrary to the recommendation of Mr. Watkins and Ms. Vanicek, I see no public
9 interest reason for maintaining disparate rates for what is effectively the same
10 service. The current rate structure offers myriad opportunities for arbitrage,
11 which, contrary to Mr. Watkins' testimony (at 8), has consequences beyond
12 simple misreporting of traffic by interexchange carriers ("IXCs"). For example:

- 13 ■ Disparate access rates diminish the productivity of the local
14 telecommunications sector. In the long run, the inevitable result of
15 productivity loss is higher rates. Eventually, arbitrage will cause
16 the existing rate structure to collapse;
- 17 ■ The current rate structure undermines the growth of efficient local
18 telecommunications competition including in high cost areas and
19 for residence customers; and

- 1 ■ The current rate structure is completely unsuitable for the future, in
- 2 which more and more traffic will be transmitted using packet
- 3 technology.

4

5 **Q7. HOW DO “ARBITRAGE OPPORTUNITIES” DISTORT THE MARKET?**

6 **A7.** “Arbitrage opportunities” are the false (uneconomic) incentives that are created by

7 having disparate and inefficient prices for interstate and intrastate switched access

8 services. These false incentives distort the market in three major ways:

- 9 ■ They lead local competitors to target customers that have a large
- 10 volume of intrastate toll traffic and for whom competitors can
- 11 undercut high intrastate switched access charges, and customers in
- 12 low-cost areas where competitors can compete somewhat more
- 13 effectively against the low retail prices that result from the current
- 14 pricing structure;
- 15 ■ They encourage the disguising of calls; and
- 16 ■ They induce the avoidance of the wireline telephone network
- 17 altogether in favor of alternative networks for making toll calls
- 18 (e.g., mobile wireless and cable) and the substitution of alternatives
- 19 to switched voice service (e.g., Voice Over Internet Protocol or
- 20 “VoIP”). It is interesting to note that Western Wireless supports
- 21 the mirroring of switched access rates (Rao at 4). This is not

1 inconsistent with the substitution point I have made precisely
2 because Western Wireless is concerned about having to compete
3 with the low-priced retail services being offered by the rural ILECs
4 for the provision of local calling.⁹
5

6 **Q8. MR. WATKINS (AT 3) ASSERTS THAT THE CURRENT INTRASTATE**
7 **RATE STRUCTURE “REPRESENTS A REASONABLE AND PRUDENT**
8 **PLAN FOR [THE] FUTURE” RECOVERY OF RURAL ILEC COSTS AND**
9 **TO MEET PUBLIC POLICY GOALS OF UNIVERSAL SERVICE. DO**
10 **YOU AGREE WITH HIS ASSERTION?**

11 **A8.** No. Ultimately, the arbitrage activities encouraged by the existing rate structure
12 will cause that rate structure to collapse. Sophisticated consumers and carriers are
13 finding more and more ways to use new technology to evade high intrastate
14 switched access rates. The other types of arbitrage that I described are also
15 growing rapidly. As a result, the rates paid by each remaining user for ILEC
16 services must increase if the ILEC is to cover its total costs and have the ability
17 and incentive to make infrastructure investments. Consumers who are seen as the
18 “beneficiaries” of today’s rate structure today could end up paying more in the

⁹ Ms. Rao testifies (at 2-3) that Western Wireless is an eligible telecommunications carrier (“ETC”) for purposes of receiving federal and state universal service funds in Nebraska and other states. Ms. Rao further testifies that the implicit subsidies in rural ILEC switched access rates (at 3) to maintain low retail rates (at 6-7) inhibit Western Wireless ability to compete.

1 future than they would have had rates been rationalized sooner. Moreover, if
2 appropriate measures are not taken now consumers are more likely to encounter
3 "rate shock" as prices for other services rise rapidly once it is clear that the current
4 approach is no longer sustainable. This latter result could clearly impact universal
5 service.

6
7 **Q9. WHY SHOULD THE NEBRASKA COMMISSION MOVE TO MIRROR**
8 **INTERSTATE SWITCHED ACCESS RATES NOW, CONTRARY TO MR.**
9 **WATKINS AND MS. VANICEK'S RECOMMENDATIONS?**

10 **A9.** The Nebraska Commission should move now to mirror interstate switched access
11 rates today because the consequences I described above will become more severe
12 over time. Moreover, these consequences will be felt throughout the state, not just
13 in the areas served by Qwest. Until the problem is fixed, competitive local
14 exchange carriers ("CLECs") will understandably respond to incentives and
15 become more and more focused on arbitrage operations rather than on competing
16 widely in Nebraska, especially in high cost areas where retail rates are typically
17 low and switched access rates are high. Beginning the restructuring process now
18 can minimize these problems and permit efficient competition to take place in all
19 areas of the state. It is important for regulators to send a credible signal to the
20 market that a rationalized rate structure is on the way. To be credible, the signal

1 should consist of a specific long-term plan plus some significant immediate
2 progress.

3
4 **Q10. WHAT ARE THE CONSEQUENCES OF THE CURRENT RATE**
5 **STRUCTURE FOR THE GROWTH OF EFFICIENT FACILITIES-BASED**
6 **LOCAL TELECOMMUNICATIONS COMPETITION?**

7 **A10.** The current rate structure undermines the growth of efficient facilities-based local
8 telecommunications competition, including in high cost areas. In this respect, I
9 agree with the testimony of Ms. Rao on behalf of Western Wireless (at 3). Large
10 business customers are attractive customers for CLECs under the current rate
11 structure. They can often be efficiently served with fiber-optic technology,
12 because they are in more densely populated business areas, (e.g., office parks) or
13 sometimes because a single end-user location is large in its own right. In addition,
14 large business users are likely to have a disproportionately large amount of toll
15 traffic. Many large business customers would continue to be attractive customers,
16 even if rates were restructured. They could still often be efficiently served with
17 fiber-optic technology. The extent of their use of intrastate toll would, however,
18 be much less relevant to their decision whether or not to go with a CLEC. This
19 would induce CLECs to shift some of their focus to businesses that have large
20 volumes of local calls (e.g., real estate firms).

1 More importantly, restructuring intrastate switched access rates would give
2 CLECs greater incentive to compete for residential customers and in rural areas of
3 Nebraska. For example, wireline CLECs could use some combination of fiber
4 optics, coaxial cable, and copper wire to offer a combination of telephone service,
5 broadband Internet access, and video programming. Such competition would be
6 very constructive. Not only would it provide competition for telephone and
7 broadband Internet service, but it would also undermine the monopoly position of
8 cable television companies, to the benefit of their customers. This type of
9 competition is not occurring on any significant scale. Maintaining the current
10 high intrastate switched access rates is working to suppress competition for
11 residential customers and for all customers in rural areas of Nebraska. The
12 economics of offering residential telephone service to compete with the
13 incumbent are simply not very attractive under the current rate structure.

14
15 **Q11. WHY SHOULD ALL ILECS IN NEBRASKA BE INCLUDED IN THE**
16 **COMMISSION'S EFFORTS TO MIRROR INTERSTATE SWITCHED**
17 **ACCESS RATES?**

18 **A11.** All of Nebraska ILECs' switched access rates must be rationalized if the problems
19 I described above are to be avoided and the full benefits of local telecom-
20 munications competition are to be realized throughout the state. Significantly this

1 is the view shared by a number of competitors (Qwest, AT&T, Sprint, and
2 Western Wireless) who have filed comments in this proceeding.

3
4 **Q12. MS. VANICEK (AT 4-5) AND MR. WATKINS (AT 7-8) EXPRESS**
5 **CONCERN THAT ATTEMPTS TO RESTRUCTURE RURAL ILECS'**
6 **INTRASTATE SWITCHED ACCESS RATES WOULD PUT PRESSURE**
7 **ON OTHER REVENUE SOURCES SUCH AS RETAIL LOCAL**
8 **EXCHANGE RATES AND NUSF FUNDS. WHAT RECOM-**
9 **MENDATIONS DO YOU HAVE TO ENABLE THE NEBRASKA**
10 **COMMISSION TO MOVE FORWARD, TO THE BENEFIT OF ALL**
11 **NEBRASKA CONSUMERS, WHILE MITIGATING THE PRESSURE ON**
12 **THE MECHANISMS FOR RURAL ILEC COST RECOVERY?**

13 **A12.** I agree with Ms. Vanicek and Mr. Watkins that rural ILECs should have a
14 reasonable opportunity to recover their costs. This is especially important in a
15 state such as Nebraska with extensive rural areas. This is why I believe that
16 intrastate switched access reductions should be accomplished on a revenue-neutral
17 basis. As intrastate switched access rates are lowered, offsetting revenues could
18 come from the creation of an intrastate subscriber line charge ("ISLC") as Qwest
19 is proposing for its service area.¹⁰ The carrier common line charge ("CCLC") rate

¹⁰ Sprint has estimated the per-line costs to be recovered and is proposing to increase its local services rates
(continued)

1 element remains in ILECs' intrastate switched access rate structure today. The
2 continued reliance on the per-minute charges assessed to long distance carriers to
3 recover what are actually per-line costs of the network is inefficient. The end-user
4 customer controls what he or she uses the loop for (indeed, in many markets, the
5 customer can choose which carrier provides the loop). While in the "old world" it
6 may have been politically convenient to choose to apportion the non-traffic
7 sensitive costs of the loop among a number of providers and thereby "mask" the
8 real costs from the end users, that world no longer exists. By contrast, recovering
9 the cost of the loop from flat per-line charges is much more efficient and in line
10 with the realities of today's telecommunications markets. The switched access
11 rate reduction and the implementation of an ISLC (or local service increases that
12 Mr. Appleby recommends) must occur concurrently. To implement only half the
13 solution would be harmful to the rural ILECs and their customers.

14 I agree with Mr. Watkins (at 9) that rural ILECs are different from the larger price
15 cap ILECs and that additional considerations may be warranted in implementing
16 this restructuring. Rural ILECs typically have a smaller and less diverse customer
17 base from which to recover fixed costs. I do not agree, however, that different
18 fundamental costing and pricing principles should be applied to rural ILECs than
19 apply to larger ILECs. Regardless of what any party to this proceeding might

rather than implement an ISLC (Appleby at 10).

1 think of the specific steps the FCC is taking in its MAG order, there is a need to
2 reduce switched access rates. It is both appropriate and necessary that this
3 Commission make progress towards this goal and put in place a framework that
4 applies statewide rather than tackling the issue on a piecemeal or incremental
5 basis.

6

7 **Q13. WHAT DO YOU MEAN BY A “STATEWIDE FRAMEWORK”?**

8 **A13.** The Commission would be wise to require mirroring across the board and then to
9 consider whether and how it should change existing universal service and “safety
10 net” programs. If the Commission is concerned about the impact of this rate
11 restructuring on universal service, it can—and should—examine changes in its
12 universal service policies that would apply to all providers that serve high-cost
13 areas in the state. If the Commission is concerned about the impact of this rate
14 restructuring on consumers, it can adjust its Lifeline and Link-up programs
15 accordingly. Any changes to these existing programs should be considered on a
16 statewide basis so that they apply to all carriers and all customers. In my opinion,
17 it is neither wise nor necessary to have piecemeal solutions to the various issues
18 that arise out of rate restructuring.

19

1 **Q14. MS. VANICEK (AT 6-8) PROPOSES THAT IXCS BE REQUIRED TO**
2 **FLOW THROUGH ANY REDUCTIONS IN INTRASTATE SWITCHED**
3 **ACCESS RATES. DO YOU AGREE WITH HER RECOMMENDATION?**

4 **A14.** No. I believe that the competitive process has—and should continue to—govern
5 the passing through of access charge reductions. There is no benefit in imposing
6 the costs of a special reporting system on the competing long distance carriers,
7 especially at a time when they are under enormous financial pressures themselves.

8

9

IV. CONCLUSION

10 **Q15. COULD YOU PLEASE SUMMARIZE YOUR TESTIMONY?**

11 **A15.** Yes. I urge the Commission to adopt a policy of adjusting intrastate switched
12 access charges to mirror those in the interstate jurisdiction. This step moves
13 Nebraska in the direction of an economically efficient pricing structure that will
14 encourage efficient competition, reduce arbitrage opportunities and serve the best
15 interests of consumers, incumbents and competitors alike. Such a move is
16 consistent with the principles I have outlined. I also support making any changes
17 revenue-neutral; for example, by adopting an offsetting ISLC as proposed by
18 Qwest. Finally, I believe that there is no need for this Commission to inject itself
19 into decisions about how reductions in access charges are apportioned by long
20 distance carriers among their customers.

1

2 **Q16. DOES THIS CONCLUDE YOUR TESTIMONY?**

3 **A16.** Yes, it does.

4

5

CURRICULUM VITAE

HARRY M. SHOOSHAN III

Received a B.A. *magna cum laude* from Harvard University in Government and a J.D. from Georgetown University Law Center.

Before co-founding Strategic Policy Research, Inc. ("SPR"), Mr. Shooshan served for eleven years on Capitol Hill. He was chief counsel and staff director of what is now the Subcommittee on Telecommunications and the Internet of the U.S. House of Representatives and was active in congressional efforts to reform the nation's communications laws.

Mr. Shooshan specializes in communications public policy analysis, regulatory reform and the impact of new technology and competition. He also advises on business strategies and market opportunities.

Mr. Shooshan is the author of numerous studies and articles dealing with various aspects of the video marketplace, including the transition to digital television and the impact of the Internet. He is one of the nation's leading authorities on telecommunications infrastructure and its relationship to economic development and to the global competitiveness of U.S. businesses.

Mr. Shooshan coordinates SPR's telecommunications and electronic mass media practice in Europe and has advised clients in the United Kingdom, Canada and the Caribbean.

Mr. Shooshan has testified before several congressional committees, before the Federal Communications Commission ("FCC") and numerous state commissions. He has also testified as an expert witness in litigation concerning broadcasting, cable and wireless cable, and in proceedings before the Copyright Arbitration Royalty Panel concerning satellite broadcasting.

From 1978 to 1991, he was an adjunct professor of law at Georgetown University Law Center, teaching regulation and communications law.

EDUCATION

GEORGETOWN UNIVERSITY LAW CENTER
J.D., Communications Law, 1975

HARVARD COLLEGE
B.A., Government, *magna cum laude*, 1968

EMPLOYMENT

STRATEGIC POLICY RESEARCH, INC.—Bethesda, Maryland
1992-Present *Principal*. Telecommunications and public policy consulting services for a variety of clients in the telecommunications industry.

NATIONAL ECONOMIC RESEARCH ASSOCIATES, INC.—Washington, D.C.
1989-1992 *Vice President*. Telecommunications and public policy consulting services for a variety of clients in the telecommunications industry.

SHOOSHAN & JACKSON INC—Washington, D.C.
1980-1989 *Principal*. Telecommunications and public policy consulting services for a variety of clients in the telecommunications industry.

SUBCOMMITTEE ON COMMUNICATIONS, INTERSTATE AND FOREIGN COMMERCE COMMITTEE, U.S. HOUSE OF REPRESENTATIVES—Washington, D.C.
1975-1980 *Chief Counsel/Staff Director*. Legislative, oversight and investigating activities relating to telecommunications.

SUBCOMMITTEE ON COMMUNICATIONS AND POWER, INTERSTATE AND FOREIGN COMMERCE COMMITTEE, U.S. HOUSE OF REPRESENTATIVES—Washington, D.C.
1974-1975 *Staff Director*. Legislative, oversight and investigating activities relating to telecommunications and energy.

U.S. HOUSE OF REPRESENTATIVES—Washington, D.C.
1969-1974 *Administrative Assistant to the Honorable Torbert H. Macdonald*. Legislative and political coordination and support.

PROFESSIONAL ACTIVITIES

Member, Federal Communications Bar Association.

TESTIMONIES

Responsive Testimony on behalf of Ameritech Indiana. Before the Indiana Utility Regulatory Commission in Cause No. 41998. *In the Matter of: Petition of Comptel, Ascent, AT&T Communications of Indiana, GP, TCG Indianapolis, and McLeodUSA Telecommunications Services, Incorporated for an Investigation into the Structural Separation of Indiana Bell Telephone Company, d/b/a Ameritech Indiana.* January 24, 2002. Reply Testimony, March 22, 2002.

Testimony on behalf of Verizon-NJ (formerly Bell Atlantic-NJ). Before the New Jersey Board of Public Utilities in Docket No. TO01020095, *I/M/O the Application of Verizon New Jersey Inc. For Approval (i) of a New Plan for an Alternative Form of Regulation and (ii) to Reclassify Multi-Line Rate Regulated Business Services as Competitive Services, and Compliance Filing.* Direct, February 15, 2001. Rebuttal Panel Testimony with William E. Taylor and Joseph H. Weber, June 15, 2001.

Testimony on behalf of Verizon-PA (formerly Bell Atlantic-PA). Before the Pennsylvania Public Utility Commission in Docket No. M-00001353 (Structural Separation) (Direct Testimony, June 26, 2000; Rebuttal Testimony, October 30, 2000).

Testimony on behalf of the Staff of the Arizona Corporation Commission. *In the Matter of the Application of US West Communications, Inc., a Colorado Corporation, for a Hearing to Determine the Earnings of the Company, the Fair Value of the Company for Ratemaking Purposes, to Fix a Just and Reasonable Rate of Return Thereon and to Approve Rate Schedules Designed to Develop Such Return,* before the Arizona Corporation Commission in Docket No. T-1051B-99-105. Direct, August 9, 2000; Surrebuttal September 8, 2000; Direct in Support of the Proposed Agreement, October 27, 2000; Supplemental Rebuttal, November 20, 2000.

Testimony on behalf of Bell Atlantic–New Jersey. Before the Board of Public Utilities in New Jersey, BPU Docket No. TO99120934. Direct, May 17, 2000; Rebuttal, September 8, 2000.

Testimony on behalf of Ameritech Illinois. Before the Illinois Commerce Commission in Docket No. 98-0860. Direct, Ameritech Illinois Ex. 5.0, March 12, 1999; Rebuttal, Ameritech Illinois Ex. 5.1 (Shooshan), March 1, 2000; Surrebuttal, Ameritech Illinois Ex. 5.2 (Shooshan), April 26, 2000.

With John Haring. *Statement of John Haring and Harry M. Shooshan*. Prepared on behalf of the Real Access Alliance. Before the Subcommittee on the Constitution of the House Judiciary Committee. March 21, 2000.

Testimony before House Public Utilities Committee, General Assembly of Ohio on Substitution House Bill 314 on behalf of Ameritech Ohio. April 12, 2000.

The Benefits of Open Access: Consumer Control, Lower Prices, Expanded Investment and New Jobs. Testimony on behalf of the OpenNET Coalition. Presented before the House Committee on Consumer Affairs of the General Assembly of Pennsylvania. Hearing on House Bill No. 1516. Harrisburg, Pennsylvania. December 14, 1999.

Testimony on "open access" before the City Council. Buffalo, New York. October 28, 1999.

With Peggy L. Rettle and Joseph H. Weber. Affidavit filed on behalf of Minnesota Telephone Association. CC Docket No. 98-1. March 6, 1998. *Response to State of Minnesota Reply Comments*. December 22, 1998.

Expert Report (*Exclusivity Over Competition: The Consequences for Minnesota*), filed on behalf of Minnesota Telephone Association in *Minnesota Equal Access Network Services, Inc. et al. v. State of Minnesota, et al.* Minnesota District Court, Second Judicial District. November 3, 1998.

Direct testimony on behalf of Bell Atlantic—Pennsylvania, Inc., *For a Determination that Provision of Business Telecommunications Services Is a Competitive Service Under Chapter 30 of the Public Utility Code*. CC Docket No. P-00971307. February 12, 1998.

Testimony before the Library of Congress, United States Copyright Office, Copyright Arbitration Royalty Panel. Presented on behalf of the Satellite Broadcasting & Communications Association. *In the Matter of 1996 Satellite Carrier Royalty Rate Adjustment Proceeding*, Docket No. 96-3 CARP-SRA. December 2, 1996.

Testimony before the Committee on Commerce, Science, and Transportation, U.S. Senate. Regarding FCC Oversight and Reform. March 19, 1996.

Testimony before the Office of the King County (Washington) Hearing Examiner. *In the Matter of Renewal of King County Television Franchises of TCI Cablevision of Washington, Inc.* On behalf of King County Office of the Prosecuting Attorney. July 14, 1995.

Testimony before the Alabama Public Service Commission. On behalf of BellSouth Telecommunications, Inc., d/b/a South Central Bell Telephone Company. Docket No. 24472. June 14, 1995.

Testimony in *Turner Broadcasting System, Inc., et al., Plaintiffs, v. Federal Communications Commission, et al., Defendants*. United States District Court for the District of Columbia. Docket No. C.A. No. 92-2247 (and related cases C.A. Nos. 92-

2292, 92-2494, 92-2495, 92-2558) (TPJ). Expert's Report, April 21, 1995; Expert Declaration filed May 25, 1995.

With Calvin Monson. Testimony before the Tennessee Public Service Commission, Inquiry for Telecommunications Rulemaking Regarding Competition in the Local Exchange, Docket No. 94-00184. On behalf of BellSouth Telecommunications, Inc., d/b/a South Central Bell Telephone Company. June 17 and August 17-18, 1994.

Testimony before the Tennessee State Senate re: Senate Bill 2758 concerning local competition. March 29, 1994.

Testimony regarding the significant competition for services offered by local exchange carriers before the Louisiana Public Service Commission. On behalf of BellSouth Telecommunications, Inc. d/b/a South Central Bell Telephone Company. Docket No. U-17949-D. January 31, 1994 and September 21, 1994.

With John Haring. Testimony re: competitive safeguards. Before the Canadian Radio-television and Telecommunications Commission. On behalf of Sprint Canada in connection with Telecom Public Notice CRTC 92-78, Review of Regulatory Framework. November 25, 1993.

With Jeffrey H. Rohlfs. *Evidence of Strategic Policy Research, Inc.* Before the Canadian Radio-television and Telecommunications Commission. Prepared for Call-Net Telecommunications, Ltd. in connection with Bell Canada, General Increase in Rates, 1993. May 10, 1993.

Direct testimony on behalf of Central Telephone Company of Illinois. Before the Illinois Commerce Commission in Docket No. 92-0211, Implementation of Section 13-507 of the Public Utilities Act, as amended by P.A. 87-856. April 19, 1993.

With John Haring. Submission to the Canadian Radio-television and Telecommunications Commission. Prepared for Call-Net Telecommunications, Ltd. in connection with Telecom Public Notice CRTC 92-78, Review of Regulatory Framework. April 13, 1993.

With John Haring and Jeffrey H. Rohlfs. *Efficient Regulation of Basic-Tier Cable Rates*. Expert Report prepared for the National Association of Broadcasters in connection with the FCC's rulemaking proceeding on cable rate regulation (MM Docket No. 92-266). January 26, 1993.

Expert testimony on cable and wireless cable markets on behalf of Microband Corporation of America and TA Associates in *SI Stern, James Simon and Beta Communications, Inc. v. MDS Acquisition Corporation, Microband Corporation of America and TA Associates*, 87 Civ. 4505 (RJW) (U.S. District Court, SDNY). November 18, 1992.

Statement on S. 1200 (The Communications Competitiveness and Infrastructure Modernization Act). Before the Subcommittee on Communications, Committee on Commerce, Science and Transportation, U.S. Senate, Washington, D.C. February 28, 1992.

Affidavit, "An Analysis of 'A Staff Proposal for the Regulation of Large Local Exchange Telephone Companies'." Prepared at the request of the Ohio Telephone Association. January 7, 1992.

Testimony regarding: "Alternatives to Rate-of-Return Regulation: Regulatory Modernization in the States." Before the Senate Select Committee on Telecommunications Infrastructure and Technology, Senate of the State of Ohio. Columbus, Ohio. April 25, 1991.

Statement regarding the telecommunications infrastructure before the Senate Select Committee on Telecommunications Infrastructure and Technology, Senate of the State of Ohio. Columbus, Ohio. February 28, 1991.

Testimony on the economics of the financial interest and syndication rules. Before the FCC on behalf of Fox Broadcasting Company, en banc hearing *In the Matter of Evaluation of the Syndication and Financial Interest Rules*, MM Docket No. 90-162. December 14, 1990.

Testimony on the importance of network modernization and on the benefits of the "Intelligent Network." Before the New York Public Service Commission on behalf of New York Telephone Company. August 1, 1990.

Statement on "Media Ownership: Diversity and Concentration." Before the Subcommittee on Communications. U.S. Senate. June 21, 1989.

Testimony regarding the "Fairness Doctrine." Before the FCC. 1984.

Statement on the Telecommunications Act of 1981. Before the Subcommittee on Telecommunications, Consumer Protection and Finance. U.S. House of Representatives. March 10, 1982.

Statement on "Diversity of Information Sources." Before the Subcommittee on Telecommunications, Consumer Protection and Finance. U.S. House of Representatives. September 15, 1981.

PUBLICATIONS

With John Haring and Jeffrey H. Rohlfs. *Propelling the Broadband Bandwagon*. Prepared for the United Kingdom Office of Telecommunications and the Office of the e-Envoy. Released September 4, 2002.

With John Haring, Jeffrey Rohlfis and Joseph Weber. *Intercarrier Compensation to Promote Efficiency of the Local Telecommunications Sector*. Filed before the FCC on behalf of BellSouth Corporation. June 3, 2002.

With John Haring and Jeffrey H. Rohlfis. *The AT&T/Comcast Merger: All Pain and No Gain*. *Ex Parte* filing before the FCC. June 7, 2002.

With John Haring and Jeffrey H. Rohlfis. *Anticompetitive Effects of the Proposed AT&T Comcast Merger*. Prepared on behalf of Qwest Communications International, Inc. for submission before the FCC. April 29, 2002.

With John Haring. *Reorienting Regulation: Toward a More Facilities-Friendly Local Competition Policy*. Before the FCC, *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Telecommunications Capability* in CC Docket Nos. 01-338; 96-98 and 98-147. Attachment A to *Comments of Qwest Communications International Inc.* April 5, 2002.

With John Haring. "Broadband policy developments in the United States. *Oftel News*. Issue No. 55. March 2002.

With John Haring. *ILEC Non-Dominance in the Provision of Retail Broadband Services*. Before the Federal Communications Commission, *In the Matter of Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services*. CC Docket No. 01-337. Attachment A to *Comments of Qwest Communications International Inc.* March 1, 2002.

With John Haring and Jeffrey H. Rohlfis. *And Now...But First: Propelling the Broadband Bandwagon*. Prepared for the U.K. Office of Telecommunications and Office of the E-Envoy. March 15, 2002.

With John Haring and Kirsten M. Pehrsson. *White Paper on Elimination of the Spectrum Cap*. Before the Federal Communications Commission ("FCC"), *In the Matter of 2000 Biennial Regulatory Review—Spectrum Aggregation Limits for Commercial Mobile Radio Services* (WT Docket No. 01-14). Attachment to *Comments of Cingular Wireless LLC*. April 13, 2001. *SPR Reply to Certain Spectrum Cap Comments*. Attachment to *Reply Comments of Cingular Wireless LLC*. May 14, 2001.

With Arturo Briceño, John Haring and Jeffrey H. Rohlfis. *The Internet and the New Economy*. March 29, 2001.

With Martin Cave. "Media and Telecoms Regulation in Converging Markets." Chapter 4, *The Regulatory Challenge*, in *e-britannia: the communications revolution*. University of Luton Press. Copyright © 2000.

With Peter Temin. "Telecommunications in the 20th Century." Prepared for *Telecom and Electronic Media Industry Insights*. February 23, 2000.

With Joseph H. Weber and Peter Temin. *MaCable.com: Closed v. Open Models for the Broadband Internet*. Prepared for the OpenNET Coalition. October 15, 1999.

With John Haring and Margaret L. Rettle. *Economic Analysis of the FCC's Proposed Policy of "Forced Access" for CLECs to Private Buildings*. Prepared for the Real Access Alliance [a coalition of national real estate industry associations] for submission before the FCC in WT Docket No. 99-217 and CC Docket No. 96-98. August 27, 1999.

With John Haring. *LPFM: The Threat to Consumer Welfare*. Prepared on behalf of the National Association of Broadcasters for submission before the FCC, *In the Matter of Creation of a Low Power Radio Service*, MM. Docket No. 99-25 and RM-9208, RM-9242. August 2, 1999. [Included as Appendix C to *Comments of the National Association of Broadcasters*.]

"A Modest Proposal for Restructuring the Federal Communications Commission." *Federal Communications Law Journal*. May 1998.

With John Haring. *Local Telecommunications Competition and Deregulation: Assessing the U.S. Model*. Prepared for the 30th Annual Conference of the Institute of Public Utilities. Williamsburg, Virginia. December 10, 1998.

With John Haring. *The Emperor's New Clothes: Regulation without a Rationale*. Prepared for submission before the FCC, *In the Matter of 1998 Biennial Regulatory Review—Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996*, MM Docket No. 98-35. *Joint Comments of Fox Television Stations, Inc. and USA Broadcasting, Inc.*, Attachment A. July 21, 1998.

"The Argument for a One-Person FCC." *Legal Times*. June 15, 1998.

"Wireless as Competitor: An Unconventional View." *Wireless Week*. June 8, 1998.

With John Haring. *Cutting the Gordian Knot of Rate Rebalancing*. Prepared for the 29th Annual Conference of the Institute of Public Utilities, "Reconciling Competition and Regulation." Williamsburg, Virginia. December 5, 1997.

With John Haring, Calvin S. Monson and Jeffrey H. Rohlf. *Replacing Competitive Bans with Competitive Safeguards: The Role of Imputation*. Prepared for BellSouth. October 15, 1997.

Troubling Ironies and Inconsistencies: The MCI/BT Merger. February 25, 1997.

With John Haring. *Focusing on the "Success Mode": A Case for Deregulating National Broadcast Television Ownership*. Prepared on behalf of Fox Broadcasting Company for

submission before the FCC, Dockets FCC 96-436, 96- 437 and 96-438. Filed February 7, 1997.

With John Haring. *Removing Regulatory Barriers to Stronger Local Television Service*. Prepared on behalf of Home Shopping Network for submission before the FCC, Dockets FCC 96-436, 96-437 and 96-438. February 7, 1997.

With John Haring, Charles L. Jackson and Jeffrey H. Rohlfs. *The Benefits of Choosing: FCC Specification of an ATV Standard*. Prepared on behalf of Capital Cities/ABC, Inc., CBS, Inc., Fox Television Stations, Inc., the Association for Maximum Service Television, the National Association of Broadcasters and National Broadcasting Company, Inc., for submission before the FCC, *In the Matter of Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*. MM Docket No. 87-268. *Reply Comments of Strategic Policy Research on the Commission's Fifth Further Notice of Proposed Rulemaking*. August 13, 1996.

With John Haring. *The Role of Resale in Establishing Local Competition*. July 1, 1996.

With Ross M. Richardson. *Comments on Hatfield Study*. Prepared on behalf of BellSouth for submission before the FCC, *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98. *Reply Comments*. Filed May 30, 1996.

With Jeffrey H. Rohlfs, John Haring and Calvin S. Monson. *Interconnection and Economic Efficiency*. Prepared on behalf of BellSouth for submission before the FCC, *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*. CC Docket No. 96-98. *Comments of BellSouth*. Filed May 16, 1996.

With John Haring, Jeffrey H. Rohlfs and Kirsten M. Pehrsson. *Public Harms Unique to Satellite Spectrum Auctions*. A study prepared for the Satellite Industry Association. March 18, 1996.

With Jeffrey H. Rohlfs and Calvin S. Monson. *Bill-and-Keep: A Bad Solution to a Non-Problem*. Prepared for submission before the FCC, *In the Matter of Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers* (CC Docket No. 95-185) and *Equal Access and Interconnection Obligations Pertaining to Commercial Mobile Radio Service Providers* (CC Docket No. 94-54). Attachment to the *Comments of the United States Telephone Association*. March 4, 1996.

With John Haring. *Local Perspectives on Localism in Broadcasting and the Adverse Impact of Satellite DARS*. Prepared on behalf of National Association of Broadcasters for submission before the FCC, *In the Matter of Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310- 2360 MHz Frequency Band*. IB Docket No. 95-91, GEN Docket No. 90-357, PP-24, PP- 86, PP-87. Attachment 1, *Comments of the National Association of Broadcasters*. Filed September 15, 1995.

With John Haring and Jeffrey H. Rohlf. *Disabilities of Continued Asymmetric Regulation of AT&T*. Prepared for AT&T. June 30, 1995.

With John Haring. *A Numerator in Search of a Denominator*. Prepared for Fox Broadcasting for submission before the FCC, *In the Matter of Review of Multiple Ownership Rules*. May 17, 1995.

With John Haring. *Building a Better Video Mousetrap*. Prepared for BellSouth. May 1995.

With John Haring. *The Evolving Electronic Media Marketplace and the Devolving Case for Broadcast Ownership Restrictions*. Prepared for Fox Broadcasting. March 20, 1995.

With Calvin S. Monson. *Multimedia Access: Trends and Issues in the United States*. Prepared for British Broadcasting Corporation. February 10, 1995.

With John Haring. *Universal Competition in the Supply of Telecommunications Services: Eight Customer Perspectives*. Prepared for Bell Atlantic. February 8, 1995.

With Calvin S. Monson. *Modernizing Regulation in a Changing Environment*. Prepared for BellSouth. June 20, 1994.

With Jeffrey H. Rohlf. *Diversification and Growth: Achieving Synergies in the Global Entertainment/Information Economy*. Prepared for Rogers Communications, Inc. for submission before the Canadian Radio-television and Telecommunications Commission. May 12, 1994.

With Jeffrey H. Rohlf. "New investment and the regulatory climate." *Telephony*. May 2, 1994.

With John Haring. *Tools to Compete: Large Customer Perspectives on the Need for Regulatory Change in Ohio*. Prepared for Ameritech—Ohio. February 1994.

With John Haring and Jeffrey H. Rohlf. *Regulatory Reform for the Information Age: Providing the Vision*. Prepared for Southwestern Bell Telephone Company. January 11, 1994.

With John Haring and Jeffrey H. Rohlf. *The U.S. Stake in Competitive Global Telecommunications Services: The Economic Case for Tough Bargaining*. Prepared for AT&T. December 16, 1993.

With John Haring and Calvin S. Monson. *Regulatory Modernization: Analysis and Options for the Iowa Utilities Board*. Prepared for the Iowa Utilities Board. October 8, 1993.

With Calvin Monson. *The Importance of Local Exchange Carrier Entry into Personal Communications Services*. Prepared for Cincinnati Bell, Inc., Denver and Ephrata Telephone Company, Illinois Consolidated Telephone Company, Lufkin-Conroe Telephone Company, North Pittsburgh Telephone Company, Peoples Telephone Company and

Southeast Telephone Company for submission at the FCC in Ex Parte Presentation, GEN Docket No. 90-314, ET Docket No. 92-100. September 9, 1993.

With John Haring. *Free to Compete: Meeting Customer Needs in the Provision of the Public Network*. Prepared for Southwestern Bell Telephone Company for submission before the FCC in *Notice of Proposed Rulemaking, In the Matter of Expanded Interconnection with Local Telephone Company Facilities*, CC Docket No. 91-141, Ex Parte Presentation of Southwestern Bell Telephone Company, Attachment A. June 11, 1993.

Co-author. *A New Social Compact: Adapting Regulation to Meet Ohio's Needs for an Advanced Information Infrastructure*. Report and Recommendations of the Blue Ribbon Panel on Ohio's Telecommunications Future. April 26, 1993.

ISDN and the Public Switched Network: Building an "Open Platform." Prepared for Bell Atlantic. July 17, 1992.

With Kirsten Pehrsson, et al. *Electronic Highways: Providing the Telecommunications Infrastructure for Pennsylvania's Economic Future*. Prepared for the Pennsylvania Chamber of Business and Industry jointly by NERA and Price Waterhouse. December 19, 1991.

With John Haring. *Competition and Consumer Welfare in Long-Distance Telecommunications*. Prepared for AT&T for submission before the FCC in *Notice of Proposed Rulemaking, In the Matter of Competition in the Interstate Inter exchange Market*, CC Docket No. 90-132. May 15, 1991.

With John Haring and Jeffrey H. Rohlfs. *The Competitive Impact of the Proposed Merger between Financial News Network and Consumer News and Business Channel*. Prepared for the Dow Jones/Group W Partnership for submission before the Federal Trade Commission. April 11, 1991.

With John Haring. *Many Solutions in Search of a Single Problem*. Prepared for submission before the FCC on behalf of Fox Broadcasting, *In the Matter of Evaluation of the Syndication and Financial Interest Rules*, MM Docket No. 90-162. November 21, 1990.

Modernizing Telecommunications Must Be a Top Economic Priority. Presented at the Northeast-Midwest Leadership Council Dialogue, sponsored by the Northeast-Mideast Institute. Washington, D.C. October 8, 1990.

With John Haring. *Rules in Search of a Rationale*. Prepared for submission before the FCC on behalf of Fox Broadcasting, *In the Matter of Evaluation of the Syndication and Financial Interest Rules*, MM Docket No. 90-162. August 1, 1990.

With John Haring. *The Absence of a Coherent Public Policy Rationale for Applying the Fin/Syn Rules to Fox*. Prepared for submission before the FCC on behalf of Fox

Broadcasting, *In the Matter of Evaluation of the Syndication and Financial Interest Rules*, MM Docket No. 90-162. June 14, 1990.

With John Haring. "An Over-the-Air Broadcasting Commentary." *Broadcasting Magazine*. May 7, 1990.

With Jeffrey H. Rohlf. *Telecommunications Infrastructure, Productivity, and Economic Development*. Prepared for the United States Telephone Association. Washington, D.C. April 9, 1990.

With John Haring. *Broadcasting and Telecommunications Infrastructure*. Prepared for the National Association of Broadcasters. Washington, D.C. April 1990.

With John Haring. *How the Financial Interest and Syndication Rules Restrict the Growth of New Broadcast Networks*. Prepared for submission before the FCC on behalf of Fox Broadcasting. *In the Matter of Amendment of 47 C.F.R. § 73.658(j)(1)(I) and (II)*, the *Syndication and Financial Interest Rules*, BC Docket No. 82-345. March 5, 1990.

"Telecommunications Modernization and the Nation's Infrastructure: Charting a New Course for Regulation and Public Policy in the United States." *Presented at the 21st Annual Williamsburg Conference*. Williamsburg, Virginia. December 11-13, 1989.

"Reforming Regulation of Local Exchange Carriers or It Is Broke, So Let's Fix It!" Presented at the National Economic Research Associates, Inc. *Telecommunications In A Competitive Environment Seminar*. Scottsdale, Arizona. April 15, 1989.

With Erwin G. Krasnow and Michael Regan. "Legislating Conduct at the FCC: Congress and the FCC Authorization Process." *Broadcast Financial Journal*. Des Moines, Iowa. March-April 1989.

With Louise A. Arnheim. *The Impact of Regulation and Public Policy on Telecommunications Infrastructure and U.S. Competitiveness*. Prepared for the Northeast-Midwest Institute. Washington, D.C. April 1989.

With Louise A. Arnheim. "Broadcasters and Telephone Companies: Risks and Opportunities." *Telco Fiber & Video Market Entry: Issues and Perspectives for the Future*. Prepared for the National Association of Broadcasters. Washington, D.C. March 1989.

"Cable Television: Promoting a Competitive Industry Structure." *New Directions in Telecommunications Policy*. Vol. 1: *Regulatory Policy*, Paula R. Newberg, ed. Duke Press Policy Studies, Duke University Press (Durham and London). 1989.

With Louise A. Arnheim. "Public Broadcasting." Prepared for the Benton Foundation Project on Communications & Information Policy Options. Washington, D.C. January 1989.

With Charles L. Jackson, Jeffrey H. Rohlfs and Louise Arnheim. *Home Video Programming: How Secure From Piracy? A Comparison of VCRs, C-Band Satellite Service, Wireless Cable, Cable, and MDS.* Prepared for MetroTEN Cablevision. Washington, D.C. July 1988.

With Charles L. Jackson, Jeffrey H. Rohlfs and Susan W. Leisner. ONA: *Keeping The Promise.* A study commissioned by Bell Atlantic. Washington, D.C. May 1988.

"Cable's Changing Tune on Competition." *CableVision.* February 1, 1988.

With Charles L. Jackson, Jeffrey H. Rohlfs and Louise A. Arnheim. *Opening The Broadband Gateway: The Need For Telephone Company Entry Into The Video Services Marketplace.* Prepared for the United States Telephone Association. Washington, D.C. November 1987.

With Charles L. Jackson and Louise A. Arnheim. "Tough Calls, Close Calls, Protocols." Prepared for BellSouth Corporation. Washington, D.C. August 1987.

With Erwin G. Krasnow. "Congress and the Federal Communications Commission: The Continuing Contest for Power." *COMM/ENT, Hastings Journal of Communications and Entertainment Law.* Vol. 9, No. 4. University of California, San Francisco, California. Summer 1987.

With Jeffrey H. Rohlfs. *Economic Analysis of Concentrated Ownership of Cable Systems.* Prepared for the Motion Picture Association of America. Washington, D.C. July 18, 1986.

"No to Must Carry; Yes to Copyright Reform." *Broadcasting Magazine.* October 7, 1985.

With Erwin G. Krasnow. "New Checks, Balances Affect FCC Policy-making." *Legal Times.* Washington, D.C. April 8, 1985. Reprinted in *Congressional Record.* April 24, 1985 at S4720.

Editor. *Disconnecting Bell: The Impact of the AT&T Divestiture.* Pergamon Press. Elmsford, New York. 1984.

"The Bell Breakup: Putting It In Perspective." *Disconnecting Bell: The Impact of the AT&T Divestiture.* Pergamon Press. Elmsford, New York. 1984.

With Thomas A. Muth. "Renewal: A Risky Business." *Cable Television Business.* Vol. 20, No. 14. July 1, 1983.

With Jane Wilson and Catherine Sloan. *The U.S. Copyright Royalty Tribunal: An Unsuccessful Experiment in Cable Copyright Regulation.* Prepared for the Canadian Cable Television Association. June 1983.

With Charles L. Jackson. *The Financial Interest and Syndication Rules: Public Harm and Consumer Loss.* Shooshan & Jackson Inc. Washington, D.C. 1983.

The U.S. Copyright Royalty: An Unsuccessful Experiment in Cable Copyright Regulation. Prepared for the Canadian Cable Television Association. Shooshan & Jackson, Inc. Washington, D.C. June 1983.

"Sports and Cable Television: Blessed by a Bandage of Cold Cash." Update. Vol. 7, No. 2. *American Bar Association*. Chicago, Illinois. Spring 1983.

With Charles L. Jackson. "Radio Subcarrier Services: How to Make Dollars and Sense Out of New Business Opportunities." *COM/TECH Report*. Vol. 2, No. 1. National Association of Broadcasters. Washington, D.C. May 1983.

"Telecommunications Competition: How We Got There & Where We Are Going." Proceedings of the 25th *IEEE Computer Society International Conference*. September 20-23, 1982. IEEE Computer Society Press. Silver Spring, Maryland. 1982.

With Catherine Reiss Sloan. "FCC Media Ownership Rules: The Case for Repeal." *Journal of Communication*. Vol. 32:4. Autumn 1982.

With Charles L. Jackson and Jane Wilson. "Alternative Methods of Extending Public Radio Coverage." Prepared for the Corporation for Public Broadcasting. March 1982.

With Charles L. Jackson. *Cable Television: The Monopoly Myth and Competitive Reality*. Prepared for the National Cable Television Association. Washington, D.C. 1982.

With Charles L. Jackson, Stanley M. Besen and Jane Wilson. *Cable Copyright and Consumer Welfare: The Hidden Cost of the Compulsory License*. Shooshan & Jackson Inc. Washington, D.C. 1981.

With Charles L. Jackson and Jane L. Wilson. "Newspapers and Videotex: How Free a Press?." *Modern Media Institute*. St. Petersburg, Florida. 1981.

With Charles L. Jackson. "The Battle to Control What You Will Get From Your Computer." *Washington Post (Outlook)*. Washington, D.C. August 24, 1980. Adapted from "Home Information Center: Newspaper On Television." *St. Petersburg Times (Perspective)*. St. Petersburg, Florida. June 22, 1980.

"Television: '... and that's the way it was ...'." *Georgetown Magazine*. Washington, D.C. January-February 1979.

"Options for Broadcasting and Public Broadcasting." *Options Papers*. House Interstate and Foreign Commerce Committee. Print 95-13.

"Public Broadcasting: A Congressional Review." *Public Telecommunications Review*. Vol. 5, No. 3. 1977.

Co-author. *Cable Television: Promise versus Regulatory Performance*. House Interstate and Foreign Commerce Committee. January 1976.

“Confrontation with Congress: Professional Sports and the Television Anti-blackout Law.” *Syracuse Law Review*. Vol. 25, No. 3. 1974.

“Congressional Oversight: The Ninety-Second Congress and the Federal Communications Commission.” *Harvard Journal on Legislation*. Vol. 10. February 1973. Reprinted in *Federal Communications Bar Journal*. Vol. 26, No. 2. 1973.

SPEECHES

“Top Ten Reasons Why Local Telephone Competition Has Been ‘An Incomplete Success’.” Presented at the Institute of Public Utilities’ 33rd Annual Regulatory Policy Conference. Williamsburg, Virginia. October 29, 2001.

“The Internet and the New Economy.” Presented in panel discussion at the International Telecommunications Society 12th European Regional Conference, *Regulating and Restructuring Telecoms and Broadcasting for Global Digitalization*. Dublin, Ireland. September 3, 2001.

“Access to Broadband Networks.” Remarks to the Montgomery County Council. Rockville, Maryland. January 27, 2000.

“Open vs. Forced Access.” Remarks to the American Legislative Exchange Council. Annapolis, Maryland. January 7, 2000.

“Toward a National Broadband Policy in Telecommunications.” Remarks at the *Michigan State University Institute of Public Utilities 31st Annual Conference*. Williamsburg, Virginia. December 8, 1999.

“Implications for State Regulators of FCC’s Broadband Policy.” Panelist, U S West Regional Oversight Committee Meeting. Denver, Colorado. September 27, 1999.

“Wired (and Wireless!) for the 21st Century: The Future of Television, Telephone, and the Internet.” Presented before the *Amos Fortune Forum*. Jaffrey Center, New Hampshire. August 13, 1999.

“Residential Broadband Internet Access: Issues, Possible Solutions and Probable Outcomes.” Prepared for the British Broadcasting Corporation. London, England. June 1999.

“Wireless and Wireline: The Coming Convergence.” Presented at the *KMB Video Journal, Twenty-Third Invitational Conference on Telecommunications Policy*. St. Petersburg, Florida. April 27, 1999.

“Local Telecommunications Competition and Deregulation: Assessing the U.S. Model.” Presented before the *30th Annual Conference of the Institute of Public Utilities*. Williamsburg, Virginia. December 10, 1998.

“Retail Price Deregulation: A ‘Win-Win’ Approach to Rate Rebalancing.” Remarks to the USWest Regional Oversight Committee. Denver, Colorado. October 5, 1998.

“Universal Service: Defining the Problem, Developing a Solution.” Remarks at the *KMB Video Journal Conference*. St. Petersburg, Florida. September 28, 1998.

“Rate Rebalancing: Competitive Impacts and Transitional Issues.” Panel discussion at the *29th Annual Conference of the Institute of Public Utilities, Reconciling Competition and Regulation*. Williamsburg, Virginia. December 5, 1997.

“Utilities in Transition: Meeting the Challenges of Competition, Consolidation and Deregulation.” Presented at the *Maryland/District of Columbia Utilities Association 1997 Spring Conference*. Ellicott City, Maryland. May 8, 1997.

“Overview—Interconnection, Network Unbundling and Local Competition Status Report.” Viewpoint on “Thoughts on Successful the Telecom Act Has Been in Fostering Competition to Date . . . and What Lies Ahead.” Presented at the *Interconnection . . . and the Competitive Checklist Conference*. Washington, D.C. April 29, 1997.

“The Long and Winding Road: A Users’ Perspective on the Telecommunications Act of 1996.” Remarks before the *National Centrex Users Group Conference*. Crystal City, Virginia. March 18, 1997.

“The Telecommunications Act of 1996: One Year Later.” Roundtable discussion presented at “Utility Regulation and Strategy: The Basics Revisited,” *Public Utility Research Center Annual Conference*. Gainesville, Florida. February 14, 1997.

“Getting It Done: Negotiations and Arbitration Under the 1996 Telecom Act.” Presented at the *28th Annual Conference of the Institute of Public Utilities, Michigan State University*. Williamsburg, Virginia. December 5, 1996.

“Assessing Mergers and Takeovers in Telecommunications.” Presented at *Conference of Antitrust, Merger Guidelines and Regulation of Utility Consolidation* sponsored by the Institute of Public Utilities, Michigan State University. Washington, D.C. November 7, 1996.

“The Telecommunications Act of 1996—Promise and Performance.” Presented at the *KMB Video Journal*. St. Petersburg, Florida. October 29, 1996.

“Capitalizing on Business Opportunities for New Jersey.” Keynote address presented at the *Telecommunications Summit* hosted by the Honorable Bob Franks (R-NJ). Somerset, New Jersey. September 24, 1996.

“Update on Current Research: Resale and Cost Models.” Presented at the NARUC Summer Committee Meetings. Los Angeles, California. July 23, 1996.

“The 1996 Telecom Act: A Blueprint for the Future?” Remarks at the *United States Telephone Association’s Frontier in Telecommunications Conferences*. Atlanta, Georgia,

March 29, 1996. San Francisco, California, April 4, 1996. Chicago, Illinois, April 15, 1996.

“The New Millennium: Settling the Information Frontier.” Remarks delivered to the United States Telephone Association’s Board of Directors Meeting. Chicago, Illinois. September 6, 1995.

“State Regulation and the Information Superhighway.” Session speaker at *Infrastructure: The Framework for Development*, sponsored by the Federal Reserve Bank of Atlanta and the Policy Research Center of Georgia State University. Atlanta, Georgia. June 15, 1995.

“Providing for Universal Service in a Competitive Environment.” Presented at the *KMB Video Journal Conference on Regulatory Devolution and Its Impact on Telecommunications*. St. Petersburg, Florida. April 28, 1995.

“Local Competition in Telecommunications: Public Policy Issues and Options.” Presented at *Market and Technological Convergence: Implications for Regulation*, *Public Utility Research Center Annual Conference*, University of Florida, Gainesville, Florida April 27, 1995.

“Local Competition: Thoughts on Cutting the Pie.” Presented to the Tennessee Telephone Association. Callaway Gardens, Pine Mountain, Georgia. April 18, 1995.

“Reshaping the Firm and Regulation in Competitive Markets.” Speech to the *15th Annual Telecommunications Conference, Organizational & Regulatory Change*, sponsored by The James C. Bonbright Utilities Center—Terry College of Business of the University of Georgia and the Georgia Public Service Commission. Westin Peachtree Plaza, Atlanta, Georgia. March 27, 1995.

“Universal Service and the \$20 Billion Problem: Making the Transition to Local Competition.” Presented before the *Telecommunications Reports Second Annual Conference, Universal Service ‘95*. Sheraton Carlton Hotel, Washington, D.C. January 19, 1995.

“Who Wants and Who Gains from Telecommunications Restructuring.” Roundtable discussant at “Toward a New Regulatory Paradigm,” *Innovative Regulation as a Prerequisite for Competition in Utility Industries, 26th Annual Conference, Institute of Public Utilities*, The Eli Broad Graduate School of Management, Michigan State University. Williamsburg, Virginia. December 14, 1994.

“Asset Management, Planning and Investment in Competitive Markets: Regulation Matters.” Presented to USTA Capital Recovery Seminar. Phoenix, Arizona. September 12, 1994.

“Telecommunications Infrastructure: A Link to Economic Development.” Presented at the Business and Community Leaders Meeting hosted by GTE to announce World Class Network. Tampa, Florida. June 8, 1994.

“Competition versus Regulation—A Vision for the Future.” Keynote address at the 87th Annual Convention of the Florida Telephone Association, *Fast Forward to the Future*. Ocean Grand, Palm Beach, Florida. June 6, 1994.

“Assessing LEC Price Caps: Where We Should Be Headed.” Presented before the *Telecommunications Reports LEC Price Caps Conference*. Ritz Carlton Hotel, Washington, D.C. May 17, 1994.

“Local Competition: The U.S. Experience.” Presented at *Communications, Law and Policy: Current Issues*, a national symposium sponsored by the Law Society of Upper Canada and the Canadian Bar Association. Ottawa, Ontario, Canada. May 6, 1994.

“Regulation and the Market Place in the Convergence Era—Responding to the Needs of the Users and Consumers.” *Reinventing State Regulatory Structures in the Convergence Era. What Model Can Work Best? And Why?, An Exchange of Views Conference*. Vol. 10, No. 5 of the KMB Video Journal. The Don CeSar, St. Petersburg, Florida. May 2, 1994.

With John Haring. “Cost-of-Capital Adjustments in a Price-Cap Model.” Paper prepared for presentation at New Mexico State University, College of Business Administration and Economics, Center for Public Utilities, *Current Issues Conference*. Santa Fe, New Mexico. March 13-16, 1994.

“Overview—Redefining Universal Service.” *Telecommunications Reports Universal Service Conference*. Washington, D.C. February 1, 1994.

“Industry and Washington Updates.” The Future of Interactive Communications, *San Diego Communications Council Conference*. San Diego, California. December 16, 1993.

“Reconciling Divergent User Needs and Regulatory Policy.” Presented at the 25th Annual Conference, *Institute of Public Utilities*. Williamsburg, Virginia. December 13, 1993.

Panelist, “State Regulatory Responsibilities and New Opportunities in the Age of Restructuring and Uncertainty.” *The KMB Video Journal, The Eleventh Invitational Conference*. St. Petersburg, Florida. November 30, 1993.

“Competition and the Obligation to Serve; the Cost of Universal Service.” National Association of Regulatory Utility Commissioners, *105th Annual Convention and Regulatory Symposium*, “Meeting Consumer Demands as Competition Grows.” New York, New York. November 15-18, 1993.

Responder, “Public TV and Public Access: Bringing Home the Electronic Highway.” Symposium jointly sponsored by the Lyndon Baines Johnson Library, the LBJ School of

Public Affairs, the Public Broadcasting System and the Alliance for Public Technology. Austin, Texas. November 5, 1993.

"Evolving Technology Equals Emerging Competition Squared." Remarks presented before the Ohio Telephone Association, *98th Annual Conference*. Cincinnati, Ohio. September 21, 1993.

With John Haring. "The \$20 Billion Impact of Local Competition in Telecommunications." Presented at the *National Association of Regulatory Utility Commissioners Symposium*. San Francisco, California. July 28, 1993.

"Has Traditional Regulation Outlived its Role in Telecommunications?" Presented at *New England Conference of Public Utilities Commissioners, 46th Annual Symposium*. The Balsams, Dixville Notch, New Hampshire. June 29, 1993.

"A New Public Policy for Changing Markets and Technology." Remarks at the *Florida Telephone Association 86th Annual Convention*. Belleview Mido Resort Hotel, Clearwater, Florida. June 8, 1993.

"Telecommunications Public Policy: How We Got Here." Panelist at United States Telephone Association Congressional Staff Seminar, *The Public Policy Challenge: Adapting Regulation to Changing Markets and Technology*. Williamsburg, Virginia. June 3-4, 1993.

"The Wireless World and Its Relationship to the Wireline Infrastructure." Panelist at *The KBM Video Journal*. St. Petersburg, Florida. April 19-21, 1993.

"Challenging Times . . . Achieving Our Regulatory Goals." Speech presented at the GTE Telephone Operations—South Area Key Management Meeting, *Challenging Times . . . Challenging Issues*. Tampa, Florida. March 17, 1993.

"A Competitor's View of Market Opportunities." Panel moderator at the *United States Telephone Association's National Issues Conference, Responding to Competition*. Washington, D.C. February 17, 1993.

"Telecommunications Infrastructure: Responding to Customers' Needs." Panelist, *KMB Video Journal—9th Invitational Conference*. Innisbrook Conference Center, Tarpon Springs, Florida. October 29, 1992.

"The Future of Telecommunications in the Information Age." Speech presented at the *GTE South Area Public Affairs Conference, Business As Usual: NOT!*. Haines City, Florida. October 6, 1992.

"Strategy for the 21st Century: Diversifying in a Competitive Marketplace." Presented before the *National Association of Broadcasters Television Group Executive Forum*. Washington, D.C. October 2, 1992.

“Incentive Regulation: Where, Why and How.” Presented before the *15th Annual Conference of Regulatory Attorneys*. Columbus, Ohio. May 6, 1992.

“Telecommunications Infrastructure in the 1990s: The Role of the Public Switched Network.” Presented before the National Council of State Telephone Association Executives. Colorado Springs, Colorado. May 4, 1992.

“Electronic Highways: Providing the Telecommunications Infrastructure for Pennsylvania’s Economic Future (A Study Prepared for the Pennsylvania Chamber of Business and Industry by NERA and Price Waterhouse), Distinctive Features and Key Findings.” Presented before the *Institute of Public Utilities, 23rd Annual Conference*. Williamsburg, Virginia. December 10, 1991.

“The Changing Scene of State Regulation: Trends and Implications.” Presented at a public forum conducted by the Wisconsin Public Utility Institute, University of Wisconsin-Madison campus. Madison, Wisconsin. December 6, 1991.

“Understanding the Role of Communications in an Information Economy and Information Society.” Presented before the *Annual Seminar on Foreign Policy, Junior Council on World Affairs*. Cincinnati, Ohio. November 23, 1991.

“The Revolution in Communications and the Challenges for Peace, Democracy and Economic Progress.” Presented before the *Issues for Business Luncheon* sponsored by the Cincinnati Council on World Affairs and hosted by Star Bank. Cincinnati, Ohio. November 22, 1991.

With John Haring. “Economic Policy Analysis of Cable Compulsory License.” Presented before the Board of Directors of the Motion Picture Association of America. Los Angeles, California. October 22, 1991.

“Telecommunications Infrastructure: Building the Electronic Highway for the 21st Century.” Presented before the *GTE Common Ground Workshop*. Madison, Wisconsin. October 8, 1991.

“Electronic Highways: Bringing America Together.” Presented before the *Mid-America Telecom Showcase & Seminar*. Kansas City, Missouri. October 7, 1991.

“Cable Television Companies and Telcos: Customers or Competitors?.” Presented to Northern Telecom’s *Business and Consumer Marketing Forum*. Tucson, Arizona. October 2, 1991.

“Competition & Change in Europe’s Telecommunications Markets.” Panel discussion at the *Third Economist Conference*. London, England. September 16, 1991.

“Modernizing Regulation: The Incentives for Investment in Telecommunications Infrastructure.” Presented before the *69th Annual Convention of the Georgia Telephone Association*. Savannah, Georgia. June 18, 1991.

“Telcos and the Information Economy: Meeting the Challenges of the 1990s.” Presented before the *Wisconsin State Telephone Association, 81st Annual Convention*. The Abbey, Fontana, Wisconsin. May 21, 1991.

“Beyond Incentive Regulation: The Challenge Facing Telephone Companies in Competitive Markets.” Presented before the Tennessee Telephone Association. Hilton Head, South Carolina. April 11, 1991.

“Benefits of Lifting the MFJ Restriction on Information Services.” Remarks before the *MFJ Symposium* sponsored by the Public Utility Commission of Ohio. Columbus, Ohio. January 25, 1991.

“Worldwide and Domestic Economic Development Through Communications.” Presented at the *Lt. Governor’s Conference on Telecommunications*, sponsored by the Indiana Department of Commerce and the Indiana Telephone Association, Inc. Indianapolis, Indiana. November 29, 1990.

“Telecommunications Infrastructure: A Framework For Public Policy Analysis.” Remarks prepared for *Bellcore’s Seventh Issues Management Fall Conference*. Florham Park, New Jersey. October 1, 1990.

“Changing Technology and Converging Markets: U.S. Telecommunications in Transition.” Presented at the *Integration of Telecommunications and Broadcasting Conference* sponsored by *The Economist Conference Unit*. London, England. September 17-18, 1990.

Remarks on telecommunications infrastructure. Prepared for the Northeast-Midwest Institute Leadership Council. Washington, D.C. September 13, 1990.

Discussion on the nature of the relationship between telecommunications and state economic development. Panelist at the *Council of State Governments’ Eastern Regional Conference*. Manchester, New Hampshire. July 31, 1990.

With John Haring. “The Demand for Information Services and the Case for Regulatory Reform in Telecommunications.” Presented to the Bellcore/Bell Canada Industry Forum. Hilton Head, South Carolina. April 1990.

With Jeffrey H. Rohlf. “Will Price Caps Correct Major Economic Flaws in the Current Regulatory Process?” Presented at the *20th Annual Williamsburg Conference*. Williamsburg, Virginia. December 5-7, 1988.

“Exercise of Congressional Influence *Vis-à-vis* the FCC and Judge Greene: Some Changing Relationships.” Presented at the *Northern Telecom Law Department Seminar*. Pebble Beach, California. May 13-15, 1988.

With Jeffrey H. Rohlf and Susan W. Leisner. “The Negative Effects of Tax Reform on the Telephone Industry: Making Up the \$15 Billion Difference.” Presented at the *15th*

Annual Telecommunications Policy Research Conference. Airlie, Virginia. September 27-30, 1987.

"Mass Media and the First Amendment: Separate but Unequal." Presented to the *Association for Education in Journalism and Mass Communication 1984 Convention.* Gainesville, Florida. August 1984.

Remarks prepared for the CBA Legislative Workshop. 1984.

Remarks prepared for the National Commission on Free and Responsible Media. Washington, D.C. February 28, 1984.

"Local Distribution in the New Telecommunications Era: Nature and Extent of Regulation." Presented to the *Workshop on Local Access: Strategies for Public Policy. Ad Hoc Committee on Access.* Chase Park Plaza Hotel. St. Louis, Missouri. September 14-17, 1982.

"Cable and Enhanced Services: Legal and Regulatory Barriers." Presented at *EASCON '81.* Washington, D.C. November 18, 1981.

"From the Crystal Ball to the Real World." Presented at the *1981 Convention of the Associated Press Managing Editors.* Toronto, Ontario, Canada. October 20, 1981.

"A New Federalism: Federal/State Regulation in the Competitive Era." Presented to the *Seventh Annual Rate Symposium of the Institute for the Study of Regulation.* Kansas City, Missouri. February 9, 1981.

Remarks prepared for the Technical Committee on Media of the White House Conference on Aging. New York. January 14, 1981.